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ABSTRACT

This program, included in "Effective Reading Programs...," serves 346 children in kindergarten through grade six. About 50 percent of the children are rural blacks, and about 50 percent are whites from the suburbs of a small city. To provide meaningful reading instruction that will enable the students to read at or above expected levels, the program equips its teachers with tools to assess reading problems and then to plan individualized programs that will best fulfill the students' instructional and emotional needs. Each child completes the work outlined on his or her prescription, which in turn results in reassessment of the reading problems and redesign of the prescription. This process repeats itself continuously throughout the year for each student. Teachers use a variety of instruments to make appropriate diagnoses--workbooks and textbooks, programed materials, and standardized tests. Teachers are sensitive to the necessity of selecting materials that are suitable to the pupil's personal needs and are often assisted in this selection by the students themselves. Instructional materials consist of commercially available kits, programed and basal readers, audiovisual aids, and many teacher-made games. (WR/AIR)

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NAIL: New Adventure in Learning (developed through ESEA, Title III)

PROGRAM AREA: Individually Determined K-3 Language Arts

PROJECT TITLE: NAIL: New Adventure in Learning (developed through ESEA, Title III)

CONTACT PERSON: Mrs. June Johnson
Project Director

LOCATION: W. T. Moore Elementary School
Tallahassee, Florida

DESCRIPTION OF PROJECT

Goals and Objectives

To develop in young children basic language skills and knowledge, along with positive attitudes toward school, the project deals with a broad range of affective and cognitive learning. Objectives in the five specific areas are listed below.

AREA 1 - Oral Language Development

Pupils will demonstrate increased vocabulary development as measured by continuous direct measurement of daily frequencies of pupil performance and the Peabody Picture Vocabulary Test.

AREA 2 - Psycholinguistic Development

Language disadvantaged pupils will significantly increase their verbal learning ability as measured by continuous direct measurement of daily frequencies of pupil performance, Peabody Picture Vocabulary Test, Illinois Test of Psycholinguistic Ability, and Wechsler Intelligence Scale for Children.

AREA 3 - Reading Development

Pupils who do not have severe physical, emotional or neurological handicaps will achieve in reading at or above expected levels as measured by continuous direct measurement of daily frequencies of pupil performance and by the Gilmore Oral Reading Test and California Test of Mental Maturity.

AREA 4 - Selected Advanced Language Arts Skills Development

All third grade pupils will achieve at or above expected levels in spelling, mechanics of writing and study skills as measured by continuous direct measurement of daily frequencies of pupil performance and by the California Test of Basic Skills.

AREA 5 - Affective Development

Given a positive classroom atmosphere and an individually determined language arts instructional program, pupils will:

a. demonstrate on-task behavior 75% of the time while engaged in academic tasks as measured by teacher observers;

b. significantly increase their self-directed academic behavior as measured by teacher observation;

c. make instructional choices appropriate to their abilities as measured by teacher observation;

d. demonstrate a positive attitude toward school as measured by the "How I Feel Attitude Inventory;" and

e. demonstrate acceptance for pupils who achieve at different levels than themselves as determined by teacher observation.

Context of the Project

Community

The community served is a part of the eastern section of Tallahassee, Florida, the state capital, with two universities and a population of approximately 100,000 people. The school "neighborhood" is a combination of densely populated suburban and sparsely populated rural areas. The housing ranges from exclusive residential areas to low value dwellings without plumbing, with average income of $4,000 to $5,000 per year.

School

New Adventure in Learning is housed at Walter T. Moore Elementary School, one of nineteen local elementary schools. It is a modern, open-space facility with seven large learning centers or pods, each with space for four classes, and a large common area. The project pupils are housed in three of these centers.

Students

All K-3 pupils in Moore Elementary (an average of 310) are involved in the project. About one-half are black pupils, a majority from rural homes. The remaining half are white pupils, the majority from middle income suburban families. With such a diverse population, many students came to school well prepared for academic and social success. Many others had very severe deficits in language skills and experiential background, and lacked positive self concepts. The academic status of these pupils is described under "Evidence of Effectiveness."

Program Description

The innovative aspect of the project is "individually determined instruction" with positive behavioral principles. Instruction is individually determined when the characteristics of each pupil play a major part in

the selection of objectives, materials, procedures and time. Learning tasks are determined individually for each child; the child pursues these tasks in a variety of settings including independent study, partner study, and both small and large group instruction. This process is applied to all areas of language arts.

Area 1 - Oral Language Development

Diagnosis (individual assessment of each child's specific skills) is done continuously to design activities appropriate for each child's needs and learning pace. These informal assessments are done by teacher observations in group and individual settings. Instruction involving a large variety of classroom activities includes lessons built around particular concepts using such resources as the Peabody Picture Vocabulary Building Kit, study prints, tangible objects, Encyclopedia Britannica's Language Experiences in Learning, Follet's The World of Language, and "process approach" strategies.

Area 2 - Psycholinguistic Development

Project teachers use the ITPA and WISC tests to design screening techniques for assessing all pupils. Those pupils showing deficits in any area are given specific remediation, usually in small groups. Activities from Psycholinguistic Learning Disabilities: Diagnosis and Remediation by Kirk and Kirk, The Remediation of Learning Disabilities by Valett, "WISC Remediation Procedures, ITPA - Behaviors," and "ITPA Remedial or Developmental Activities" supplement teacher-designed lessons. In addition to these lessons for pupils with special needs, teachers conduct daily language activities with all pupils, teaching and reinforcing psycholinguistic skills.

Area 3 - Reading Development

Readiness to read is diagnosed in auditory and visual discrimination, psychomotor development, social and emotional adjustments, psycholinguistic abilities, vocabulary development and concept development. This diagnosis is done by formal assessment and informal checklists. Instruction is given to develop these skills before entering formal reading. Such activities as telling about pictures, drawing stories, classifying objects, attaching word labels to objects, working with rhyming words, sequencing pictures, giving main ideas of stories heard, learning songs, working puzzles, copying letters, numbers and shapes are used.

Those students having reading readiness skills are involved in a formal program of reading development. All reading instruction is based on the results of on-going diagnosis, using teacher observation of reading performance along with word lists, informal reading inventories, the Schonell Word Reading Test, a phonics inventory, and previously completed individual prescriptions. To accommodate as many different reading levels and learning styles as possible, teacher-led instruction is

followed by reading prescriptions that are written for each pupil. Teachers use instructional materials and techniques from basal reading texts and individualized sources (such as the Barnell-Loft Specific Skills Series, the Lyons and Carnahan Phonics We Use, the SRA Reading Labs, the Dolch Puzzle Books, the Weekly Reader Phonics and Word Power). Such materials permit teachers to develop reading activities (both teacher-led and individually prescribed) which offer pupils a variety of learning activities.

Area 4 - Selected Advanced Language Arts Skills Development

Spelling - For diagnostic and grouping purposes, teachers give screening tests which consist of words from various spelling tests and group pupils according to specific needs. The groups are flexible. Teachers then select from basal texts, individualized kits, and language experience instruction, the approach best meeting each group's needs.

Mechanics of Writing - Many opportunities to write compositions are provided. In the interest of encouraging creativity, teachers ignore grammatical and spelling errors in the first composition efforts and concentrate on the generation of ideas. As the pupil becomes more able to express his ideas freely on paper, increased attention is given to such mechanics as spelling, grammar, and punctuation. Ideas come from discussions of pictures or topics connected with instructional units, introductory sentences provided by the teacher, discussions of feelings, follow-up of field trips and other motivational devices.

Study Skills - Teachers work regularly on dictionary usage with those pupils who have acquired the prerequisite skills. Additional study skills are developed using the SRA Graph and Picture Study Skills Kit and the SRA Map and Globe Skills Kit. Library skills are developed by the school media teacher working with small groups of pupils and special classroom projects individually selected by pupils.

Area 5 - Affective Development

All pupil activities are planned to develop a positive classroom atmosphere in which learning may effectively and pleasantly take place.

Three techniques are used:

1. the consistent application of positive reinforcement techniques in line with research findings of behavioral psychology;

2. the consistent use of an individually determined language arts program; and

3. the consistent use of teacher modeling in respect to the stated objective for this specific area.

In the five major areas discussed, most materials employed are commercially available. Among these are reading kits, programmed workbooks, skills workbooks, basal textbooks, spelling kits, study skills kits, puzzles, overhead transparencies, filmstrips, and all required hardware to implement the software items such as filmstrip projectors, overhead projectors, language masters, record players, listening stations, etc.

The key to this project's uniqueness lies in the instructional methodology employed by project teachers. By utilizing a variety of assessment instruments and techniques,the teachers have been able to diagnose conceptual, language arts and behavioral needs. Using the flexible facilities and available resource people (teachers, aides and parent volunteers), teachers are able to provide varied learning tasks and activities to meet the wide range of pupil abilities and interests.

The entire instructional process consists of a recurring cycle of pupil assessment - teacher planning - classroom implementation back to pupil assessment and so on. All classroom components are effectively combined to create an educational atmosphere where each pupil is free to move and interact with others, make instructional choices related to materials and activities, experience success in academic tasks, and be treated as a person of worth.

Academic learning is motivated by use of behavioral techniques that continually reward desired behavior and reduce incidence of inappropriate behavior. The project's use of these techniques has been innovative in that regular classroom teachers have been able to employ them consistently over time. This capability has maintained positive student attitudes and has increased productivity (on-task learning behavior).

Staffing and Training

Inservice includes:

1. the theory and application of behavior modification;
2. the use of standardized and informal diagnostic instruments, including the interpretation of results and identification of appropriate teaching strategies;
3. the techniques for screening and remediation of psycholinguistic skills;
4. appropriate record keeping and management techniques;
5. appropriate oral language activities;
6. the planning and maintenance of activity centers;
7. the analysis of available instructional materials in terms of purpose, score, type of pupils, instructional settings required,

usage possibilities, and so forth; and

8. the use of teacher aides to maximize both instructional and non-instructional project efforts.

Parent and Community Involvement

Parents have been involved extensively as volunteers, averaging 100 hours per week.

An advisory council, made up of approximately 30 members with diverse backgrounds, meets periodically during the school year. It provides feedback valuable in planning activities and disseminating information to the community.

In addition to community involvement, teachers from Blessed Sacrament Catholic School (non-public) and most of the other 18 public elementary schools in the district have sent teachers to team with project teachers for a week during the academic year.

Costs

The only resources needed for adopting the program, beyond those normally provided by typical school districts, are for teacher training, instructional materials, and equipment.

Training

When a state/school/district wishes to adopt New Adventure In Learning, a two-week seminar is provided at the center to train a local trainer/coordinator. The seminar enables the trainer/coordinator to train local teachers and staff in basic techniques and program implementation.

In-service would involve cost of travel and per diem for Trainer/Coordinator for 2 weeks and released time for training with teachers as deemed necessary.

In line with the concept of competency based teacher education, instructional modules are designed to achieve specific performance objectives. The attainment of each objective results in a specific teaching competency necessary for replication of the New Adventure In Learning program. Pre and post assessments give feedback on each trainee's performance on each instructional module.

The five modules and their related terminal performance objectives are as follows:

1. Developing a Positive Classroom Environment: The Technique of Behavior Modification. (38 pages)

   Through a number of written questions, the teacher will demonstrate a knowledge of:
   A. the function of a positive classroom environment,
   B. the concept of behavior modification as used in New Adventure In Learning,
   C. some techniques of positive reinforcement, to the standards set in the answer key.

2. Techniques for Diagnosing Reading Abilities (62 pages)

Given audio recordings of an elementary student, the teacher will use the informal phonics inventory, the Schonell Word Reading Test, the informal reading inventory, and the Dolch Word List to diagnose the student's reading ability as reflected by each test, to the standards set in the answer key.

3. Individualizing Reading Instruction: The Use of Prescriptions (34 pages)

Given diagnostic information about an elementary student, the teacher will provide a reading prescription for the student, to the standards set in the answer key.

4. The Design of Oral Language Instruction (40 pages)

Given a number of written questions, the teacher will be able to:
A. describe the function of oral language instruction,
B. describe procedures for organizing for oral language instruction,
C. list some types of oral language groups,
D. describe oral language presentation skills, to the standards set in the answer key.

5. Reducing Language Deficits: Psycholinguistic Remediation (36 pages)

Given a description of an elementary student, the teacher will diagnose and suggest corrective activities for psycholinguistic weaknesses, to the standards set in the answer key.

Practice sessions are provided in small and large group settings after the completion of each module. Simulated experiences such as demonstrations, games and practice assignments allow trainees to discuss techniques and apply new knowledge to problem solving.

Numerous opportunities are given to observe in the demonstration classrooms. Thus, trainees could see for themselves how project techniques are used successfully with actual pupils and teachers.

Demonstration teachers and aides speak informally with training groups. Details of how the program is conducted are discussed and questions answered.

Materials

A number of commonly used kinds of materials are needed, not specific commercial programs. Such things as programmed materials, reading kits, and learning games, where children can work on different reading tasks and on different levels all at the same time, are needed.

Start-up costs will range from $0 to $20 per pupil, depending upon what is already in the school. Costs for operating beyond the first year would involve only replacement of consumed materials. This year's project is supported entirely by normal local district funds, with the exception of those expenses directly related to the D/D center.

Equipment

The project uses equipment commonly available in schools. A new school would need to provide:

1. ear phone sets (1 per teacher);
2. cassette players (1 per teacher);
3. record player (1 per teacher);
4. filmstrip projector (1 per 2-3 teachers); and
5. language master (1 per 2-3 teachers).

Supplies to use with the above equipment (tapes, records, filmstrips, A/V kits, etc.) would vary. For the initial year of adoption, $5 per pupil would be adequate. Continued operation would involve replacement and expansion as desired.

A school also has the option of adopting components of the program (such as diagnosis-prescriptive teaching, psycholinguistics, behavior modification, or certain grade levels) rather than the complete design, and the cost would be proportional.

EVIDENCE OF EFFECTIVENESS

In designing the evaluation scheme, an experimental control design was considered. The possibility of locating a well-matched control group for the Southern, half rural, half small city suburban, half white, half black population in an open-space setting in 1970 was, however, very unlikely. Nationally normed standardized tests were used on a pre-post basis instead. This was seen as appropriate since the project was developmental rather than experimental in nature. The tests were normed with generally less disadvantaged pupils than project population. Comparison of project pupil growth to those norms would, therefore, yield a conservative measure of the effectiveness of intervention.

In addition, continuous direct measurement was used. This employed a Standard Behavior Chart measuring daily frequencies of behaviors to determine behavior change. The ratio of correct frequencies to incorrect frequencies is known as the improvement index.

Assessment Instruments and Data Results

Area 1 - Oral Language Development

The Peabody Picture Vocabulary Test was given to all K-3 pupils. In the third year of project operation, this test indicated a significant pupil

growth ($t = 12.47$, $p < .001$) for total K-3 population. It is commonly expected that there will be one month's growth for one month of treatment. The number of pupils making more than one year's growth in mental age for seven months of treatment increased from 35% the first year of the project to 51% the final year. The number of pupils making no gain decreased from 35% the first year to 18% the final year.

The mean improvement index was X 1.67, indicating a 67% increase in pupil accuracy for vocabulary development.

Area 2 - Psycholinguistic Development

The Illinois Test of Psycholinguistic Ability and the Wechsler Intelligence Scale for Children were administered to language disadvantaged pupils. A statistically significant gain occurred on the ITPA ($t = 6.26$, $p < .01$). Since skills measured by this test are those necessary for reading, the results show that they can be taught in a regular classroom. Heretofore, these skills have been taught only in clinical situations.

Mean growth on the WISC was +1.25. While this gain is not statistically significant ($t = 0.92$, $p > .10$), failure to obtain a substantial change in either direction indicates an essentially normal growth rate. This is significant when considering the national trend that disadvantaged children regularly experience regression in measures of intelligence.

The mean improvement index was X 1.32 which indicates a 32% increase in pupil accuracy in psycholinguistic skills.

Area 3 - Reading Development

All 1-3 pupils were given the Gilmore Oral Reading Test. Only the accuracy score was used, as the test does not give a "pure" reading comprehension assessment. To determine reading expectancies, a formula proposed by Albert Harris, Mental Age minus Reading Age, was used.

Pupil growth indicated by the Gilmore test was extremely significant ($t = 13.04$, $p < .001$). Due to low mental age, 20.7% of the 1-3 pupils were not expected to read during the first year of project. This was reduced to 10% by the third year, with a relatively stable population. The number of pupils meeting their individual reading expectancy (commensurate with their ability) was increased from 37% of the 1-3 population at the beginning of the project to 57% at the end of the project.

When the project began in September 1970, only 10% of the 1-3 population read on or above grade level on the Gilmore test. This was raised to 51% by May of 1973.

The mean improvement index was X 1.22 which indicates a 22% increase in pupil accuracy in reading.

Area 4 - Selected Advanced Language Arts Skills Development

To measure achievement in mechanics of writing, spelling, and study skills, the California Test of Basic Skills was given to all third grade pupils. While not generating a statistical figure, the results of the CTBS were more than satisfactory. Seventy-three percent of the third grade pupils achieved at expected levels in study skills, 88% on mechanics of writing and 91% in spelling. In spelling, the mean improvement index was X 1.23, which indicates a 23% increase in pupil accuracy. No continuous frequencies were kept for mechanics of writing or study skills.

Area 5 - Affective Development

Part A (On-Task Behavior): A majority of project teachers have demonstrated a high level of application in positive reinforcement in their classrooms. Ten or twelve teachers met or exceeded 80% positive reinforcement interactions for two years as substantiated by a trained observer using a ten-second interval observation schedule. According to Dr. Charles Madsen, project consultant, Florida State University, only 3% of 6,000 teachers observed nationally met 50% or higher.

Because of this training, project pupils have demonstrated a very high level of on-task behavior. This behavior has been as high as 87.6% as compared to 40-50% for more than 6,000 observed classrooms with untrained teachers.

Part B (Self-Directed Academic Behavior) and Part C (Instructional Choices): For evaluative charting purposes, these parts were grouped together. The mean improvement index for both was X 1.13, indicating a 13% increase in pupil accuracy.

Part D (Attitude Toward School): This segment of objective 5 was measured using the "How I Feel Attitude Inventory" for primary pupils. The inventory is built on a five-point scale (1 being most positive or happy, and 5 being most negative, or unhappy). Since the average pre-test rating per item was 1.8 (happy), there was little opportunity for change in an upward direction. This positive position was maintained with an average of 1.7 in the end of year testing.

A 2 X 2 contingency analysis (for differences between advantaged and disadvantaged students) was performed on the data and yielded a non-significant chi-square. Thus, the attitude toward school of the disadvantaged students did not, on a statistical basis, change differentially from that of the advantaged students, an extremely encouraging event.

Part E (Acceptance of Others): No systematic data was collected in an effort to validate the attainment of this part of the objective for area 5. However, owing to the presence of a number of hearing impaired children (not part of the project population) in the school, ample opportunity existed to observe the interaction of the project pupils with these rather conspicuously impaired peers. On several occasions during the visits to

Moore School by an outside evaluating team, instances were documented where project pupils interacted in a friendly and helpful way with the hearing impaired pupils. No occurrence of aggressive or belittling behavior was observed, although it would be naive to suppose that none occurred throughout the entire project period.

The objective for area 5 involves teacher observation in four of the five categories. These procedures are seen as appropriate in that they provide specific feedback to the project staff on the effectiveness of inservice training and the frequency of positive, on-task and error behaviors.

The assessment instruments and techniques described in this section of the proposal were administered, scored and analyzed in the following manner:

1. The Gilmore Oral Reading Test, Illinois Test of Psycholinguistic Ability, Wechsler Intelligence Scale for Children were administered and scored by faculty members and graduate students from the Florida State University Reading Clinic and from the Florida State University Department of Psychology. The results of the testing in years one and two were analyzed and interpreted by the Florida State University Department of Educational Research and Testing. In year three, the results were analyzed and interpreted by Precision Teaching of Florida, Gainesville, Florida.

2. The Peabody Picture Vocabulary Test was administered and scored by faculty members and graduate students from the Florida State University Reading Clinic and by personnel trained by the New Adventure in Learning project staff. The results were analyzed and interpreted in the same manner as the assessment instruments in 1 above.

3. The California Test of Basic Skills was administered by New Adventure in Learning project teachers and scored by the New Adventure in Learning project staff. The results were analyzed and interpreted in the same manner as in 1 above.

4. Continuous direct measurement was employed during the third year of the project. Measurements were made by project teachers who were trained to 90% accuracy by Precision Teaching of Florida. Results of the measurements were analyzed and interpreted by Precision Teaching of Florida.

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